

CRF Errors Corrected by the STIC Systems Branch

CRF Processing Date: 4/3/01

Edited by: D

Verified by: _____ (STIC staff)

Serial Number: 09/941,179A

- Changed a file from non-ASCII to ASCII
- Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- Edited a format error in the Current Application Data section, specifically:
- Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____
- Added the mandatory heading and subheadings for "Current Application Data".
- Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- Changed the spelling of a mandatory field (the headings or subheadings), specifically:
- Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
- Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
- Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- Inserted colons after headings/subheadings. Headings edited included:
- Deleted extra, invalid, headings used by an applicant, specifically:
- Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file;
 page numbers throughout text; other invalid text, such as _____
- Inserted mandatory headings, specifically:
- Corrected an obvious error in the response, specifically:
- Edited identifiers where upper case is used but lower case is required, or vice versa.
- Corrected an error in the Number of Sequences field, specifically:
- A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- Other:

*Examiner: The above corrections must be communicated to the applicant in the first Office
Action. DO NOT send a copy of this form.

3/1/95



OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/941,179A

DATE: 04/03/2002
TIME: 11:43:41

Input Set : A:\PTO.DC.txt
Output Set: N:\CRF3\04032002\I941179A.raw

3 <110> APPLICANT: Bayer Aktiengesellschaft
5 <120> TITLE OF INVENTION: Acetylcholine receptor subunits
7 <130> FILE REFERENCE: Le A 34 821
W--> 8 <140> CURRENT APPLICATION NUMBER: US/09/941,179A
9 <141> CURRENT FILING DATE: 2001-08-27
11 <150> PRIOR APPLICATION NUMBER: DE 100 42 177.6
12 <151> PRIOR FILING DATE: 2000-08-28
14 <160> NUMBER OF SEQ ID NOS: 17
16 <170> SOFTWARE: PatentIn Ver. 2.1
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 45
20 <212> TYPE: PRT
21 <213> ORGANISM: Torpedo californica
23 <400> SEQUENCE: 1
24 Asp Phe Ala Ile Val His Met Thr Lys Leu Leu Leu Asp Tyr Thr Gly
25 1 5 10 15
26 Lys Ile Met Trp Thr Pro Pro Ala Ile Phe Lys Ser Tyr Cys Glu Ile
27 20 25 30
28 Ile Val Thr His Phe Pro Phe Asp Gln Gln Asn Cys Thr
29 35 40 45
30 Ile Val Thr His Phe Pro Phe Asp Gln Gln Asn Cys Thr
31 35 40 45
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 1869
37 <212> TYPE: DNA
38 <213> ORGANISM: Artificial Sequence
40 <220> FEATURE:
41 <221> NAME/KEY: CDS
42 <222> LOCATION: (1)..(1866)
43 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified alpha
44 4 subunit of the chicken nicotinic acetylcholine
45 receptor
47 <400> SEQUENCE: 2
48 atg gga ttt ctc gtg tcg aag gga aac ctc ctc ctc ctg ctg tgt gcc 48
49 Met Gly Phe Leu Val Ser Lys Gly Asn Leu Leu Leu Leu Cys Ala
50 1 5 10 15
51 agc atc ttc ccc gct ttc ggc cac gtg gaa acg cga gcc cat gcg gag 96
52 Ser Ile Phe Pro Ala Phe Gly His Val Glu Thr Arg Ala His Ala Glu
53 20 25 30
54 gag cgc ctc ctg aag aaa ctc ttc tcc ggg tat aac aag tgg tcc cgt 144
55 Glu Arg Leu Leu Lys Lys Leu Phe Ser Gly Tyr Asn Lys Trp Ser Arg
56 35 40 45
57 ccc gtc gcc aac att tcg gat gtg gtc ctg gtc cgc ttc ggc ttg tcc 192
58 Pro Val Ala Asn Ile Ser Asp Val Val Leu Val Arg Phe Gly Leu Ser
59 50 55 60
60

Input Set : A:\PTO.DC.txt
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64	ata	gcc	cag	ctc	atc	gat	gtt	gat	gag	aag	aac	caa	atg	atg	acc	aca	240
65	Ile	Ala	Gln	Leu	Ile	Asp	Val	Asp	Glu	Lys	Asn	Gln	Met	Met	Thr	Thr	
66	65				70				75				80				288
68	aat	gtg	tgg	gtg	aag	cag	gag	tgg	cac	gac	tac	aag	ctg	cgc	tgg	gac	
69	Asn	Val	Trp	Val	Lys	Gln	Glu	Trp	His	Asp	Tyr	Lys	Leu	Arg	Trp	Asp	
70					85				90				95				
72	ccc	cag	gag	tat	gaa	aac	gtc	aca	tcc	atc	cga	atc	ccc	tca	gag	ctc	336
73	Pro	Gln	Glu	Tyr	Glu	Asn	Val	Thr	Ser	Ile	Arg	Ile	Pro	Ser	Glu	Leu	
74		100				105				110							384
76	atc	tgg	ccg	ccg	gac	ata	gtc	ctc	tac	aac	aat	gcc	gac	ggc	aac	ttc	
77	Ile	Trp	Arg	Pro	Asp	Ile	Val	Leu	Tyr	Asn	Asn	Ala	Asp	Gly	Asn	Phe	
78		115				120				125							432
80	gag	gta	acg	ctg	gcg	acg	aag	gcg	act	ttg	aat	tat	acg	gga	cgt	gtg	
81	Glu	Val	Thr	Leu	Ala	Thr	Lys	Ala	Thr	Leu	Asn	Tyr	Thr	Gly	Arg	Val	
82		130				135				140							480
84	gag	tgg	ccg	ccg	gct	atc	tac	aag	tcc	tgc	tgc	gag	atc	gac	gtg		
85	Glu	Trp	Arg	Pro	Pro	Ala	Ile	Tyr	Lys	Ser	Ser	Cys	Glu	Ile	Asp	Val	
86		145				150				155				160			528
88	gaa	tac	ttc	ccg	ttc	gac	cag	cag	acg	tgc	atg	aag	ttc	ggc	tcg		
89	Glu	Tyr	Phe	Pro	Phe	Asp	Gln	Gln	Thr	Cys	Val	Met	Lys	Phe	Gly	Ser	
90						165				170				175			576
92	tgg	aca	tat	gac	aaa	gct	aag	ata	gac	ttg	gtg	agc	atg	cat	agc	cat	
93	Trp	Thr	Tyr	Asp	Lys	Ala	Lys	Ile	Asp	Leu	Val	Ser	Met	His	Ser	His	
94		180				185				190							624
96	gtg	gac	caa	ctg	gac	tac	tgg	gaa	agc	ggg	gag	tgg	gtc	atc	att	aat	
97	Val	Asp	Gln	Leu	Asp	Tyr	Trp	Glu	Ser	Gly	Glu	Trp	Val	Ile	Ile	Asn	
98		195				200				205							672
100	gcc	gtg	ggc	aat	tac	aac	agc	aag	aaa	tat	gaa	tgc	tgc	aca	gag	atc	
101	Ala	Val	Gly	Asn	Tyr	Asn	Ser	Lys	Lys	Tyr	Glu	Cys	Cys	Thr	Glu	Ile	
102		210				215				220							720
104	tac	cct	gat	ata	act	tac	tcc	ttc	att	atc	cg	agg	ctg	ccg	ctg	ttc	
105	Tyr	Pro	Asp	Ile	Thr	Tyr	Ser	Phe	Ile	Ile	Arg	Arg	Leu	Pro	Leu	Phe	
106		225				230				235				240			768
108	tac	aca	atc	aat	ttg	atc	att	ccc	tgc	ctg	ctt	atc	tcc	tgc	ttg	act	
109	Tyr	Thr	Ile	Asn	Leu	Ile	Ile	Pro	Cys	Leu	Leu	Ile	Ser	Cys	Leu	Thr	
110						245				250				255			816
112	gtc	ctg	gtc	tcc	tac	cta	ccc	tct	gag	tgc	gga	gag	aag	ata	acc	ttg	
113	Val	Leu	Val	Phe	Tyr	Leu	Pro	Ser	Glu	Cys	Gly	Glu	Lys	Ile	Thr	Leu	
114		260				265				270							864
116	tgc	atc	tct	gtg	ctg	cta	tcc	ctc	acg	gtg	ttc	ctg	ctg	ctc	atc	aca	
117	Cys	Ile	Ser	Val	Leu	Leu	Ser	Leu	Thr	Val	Phe	Leu	Leu	Ile	Thr		
118		275				280				285							912
120	gag	atc	atc	cct	tct	acc	tcc	ctg	gtc	atc	ccc	ctg	ata	gga	gag	tat	
121	Glu	Ile	Ile	Pro	Ser	Thr	Ser	Leu	Val	Ile	Pro	Leu	Ile	Gly	Glu	Tyr	
122		290				295				300							960
124	ctg	ctc	tcc	acc	atg	ata	ttt	gtc	acc	ttg	tct	atc	atc	atc	act	gtc	
125	Leu	Leu	Phe	Thr	Met	Ile	Phe	Val	Thr	Leu	Ser	Ile	Ile	Ile	Thr	Val	
126		305				310				315				320			1008
128	ttt	gtg	ctc	aac	gta	cac	cac	cgt	tca	cca	cgt	acc	cac	acg	atg	cct	

Input Set : A:\PTO.DC.txt
Output Set: N:\CRF3\04032002\I941179A.raw

129 Phe Val Leu Asn Val His His Arg Ser Pro Arg Thr His Thr Met Pro				
130	325	330	335	
132 gac tgg gtg agg agg gtc ttc ctt gac ata gtc cca cgt ctc ctc ttc			1056	
133 Asp Trp Val Arg Arg Val Phe Leu Asp Ile Val Pro Arg Leu Leu Phe				
134	340	345	350	
136 atg aag cgg ccc tcc aca gtg aaa gac aat tgc aag aag ctt att gaa			1104	
137 Met Lys Arg Pro Ser Thr Val Lys Asp Asn Cys Lys Lys Leu Ile Glu				
138	355	360	365	
140 tct atg cac aaa cta acc aac tca cca agg ctt tgg tct gag acc gac			1152	
141 Ser Met His Lys Leu Thr Asn Ser Pro Arg Leu Trp Ser Glu Thr Asp				
142	370	375	380	
144 atg gag ccc aac ttc act acc tca tcc tcc ccc agc ccc cag agt aat			1200	
145 Met Glu Pro Asn Phe Thr Thr Ser Ser Pro Ser Pro Gln Ser Asn				
146	385	390	395	400
148 gaa cct tca ccc aca tct tcc tgt gcc cac ctt gag gag cca gcc			1248	
149 Glu Pro Ser Pro Thr Ser Ser Phe Cys Ala His Leu Glu Glu Pro Ala				
150	405	410	415	
152 aaa cct atg tgc aaa tcc cct tct gga cag tac tca atg ctg cac cct			1296	
153 Lys Pro Met Cys Lys Ser Pro Ser Gly Gln Tyr Ser Met Leu His Pro				
154	420	425	430	
156 gag ccc cca cag gtg acg tgt tcc tct ccg aag ccc tcc tgc cac ccc			1344	
157 Glu Pro Pro Gln Val Thr Cys Ser Ser Pro Lys Pro Ser Cys His Pro				
158	435	440	445	
160 ctg agt gac acc cag acc aca tct atc tca aaa ggc aga tgc ctc agt			1392	
161 Leu Ser Asp Thr Gln Thr Ser Ile Ser Lys Gly Arg Ser Leu Ser				
162	450	455	460	
164 gtt cag cag atg tac agc ccc aat aag aca gag gaa ggg agc atc cgc			1440	
165 Val Gln Gln Met Tyr Ser Pro Asn Lys Thr Glu Glu Gly Ser Ile Arg				
166	465	470	475	480
168 tgt agg tcc cga agc atc cag tac tgt tac ctg cag gag gac tct tcc			1488	
169 Cys Arg Ser Arg Ser Ile Gln Tyr Cys Tyr Leu Gln Glu Asp Ser Ser				
170	485	490	495	
172 cag acc aat ggc cac tct agt gcc tct cca gcg tcg cag cgc tgc cac			1536	
173 Gln Thr Asn Gly His Ser Ser Ala Ser Pro Ala Ser Gln Arg Cys His				
174	500	505	510	
176 ctc aat gaa gag cag ccc cag cac aag ccc cac cag tgc aag tgt aag			1584	
177 Leu Asn Glu Glu Gln Pro Gln His Lys Pro His Gln Cys Lys Cys Lys				
178	515	520	525	
180 tgc aga aag gga gag gca gct ggc aca ccg actcaa gga agc aag agc			1632	
181 Cys Arg Lys Gly Glu Ala Ala Gly Thr Pro Thr Gln Gly Ser Lys Ser				
182	530	535	540	
184 cac agc aac aaa gga gaa cac ctc gtg ctg atg tcc cca gcc ctg aag			1680	
185 His Ser Asn Lys Gly Glu His Leu Val Leu Met Ser Pro Ala Leu Lys				
186	545	550	555	560
188 ctg gcg gtg gaa ggg gtc cac tac att gca gac cac ctg cga gca gaa			1728	
189 Leu Ala Val Glu Gly Val His Tyr Ile Ala Asp His Leu Arg Ala Glu				
190	565	570	575	
192 gat gca gat ttc tca gtg aag gaa gac tgg aag tac gta gca atg gtc			1776	
193 Asp Ala Asp Phe Ser Val Lys Glu Asp Trp Lys Tyr Val Ala Met Val				

Input Set : A:\PTO.DC.txt
Output Set: N:\CRF3\04032002\I941179A.raw

194 580 585 590 1824
196 att gac cgg atc ttt ctc tgg atg ttc atc atc gtg tgt ttg ctg ggg
197 Ile Asp Arg Ile Phe Leu Trp Met Phe Ile Ile Val Cys Leu Leu Gly
198 595 600 605 1869
200 acc gtt ggg ctc ttc ctc ccg ccg tgg ctg gca gga atg atc taa
201 Thr Val Gly Leu Phe Leu Pro Pro Trp Leu Ala Gly Met Ile
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205 <210> SEQ ID NO: 3
206 <211> LENGTH: 622
207 <212> TYPE: PRT
208 <213> ORGANISM: Artificial Sequence
210 <220> FEATURE:
211 <223> OTHER INFORMATION: Description of Artificial Sequence: Modified alpha
212 4 subunit of the chicken nicotinic acetylcholine
213 receptor
215 <400> SEQUENCE: 3
216 Met Gly Phe Leu Val Ser Lys Gly Asn Leu Leu Leu Leu Cys Ala
217 1 5 10 15
218 Ser Ile Phe Pro Ala Phe Gly His Val Glu Thr Arg Ala His Ala Glu
219 20 25 30
220 Glu Arg Leu Leu Lys Lys Leu Phe Ser Gly Tyr Asn Lys Trp Ser Arg
221 35 40 45
222 Pro Val Ala Asn Ile Ser Asp Val Val Leu Val Arg Phe Gly Leu Ser
223 50 55 60
224 Ile Ala Gln Leu Ile Asp Val Asp Glu Lys Asn Gln Met Met Thr Thr
225 65 70 75 80
226 Asn Val Trp Val Lys Gln Glu Trp His Asp Tyr Lys Leu Arg Trp Asp
227 85 90 95
228 Pro Gln Glu Tyr Glu Asn Val Thr Ser Ile Arg Ile Pro Ser Glu Leu
229 100 105 110
230 Ile Trp Arg Pro Asp Ile Val Leu Tyr Asn Asn Ala Asp Gly Asn Phe
231 115 120 125
232 Glu Val Thr Leu Ala Thr Lys Ala Thr Leu Asn Tyr Thr Gly Arg Val
233 130 135 140
234 Glu Trp Arg Pro Pro Ala Ile Tyr Lys Ser Ser Cys Glu Ile Asp Val
235 145 150 155 160
236 Glu Tyr Phe Pro Phe Asp Gln Gln Thr Cys Val Met Lys Phe Gly Ser
237 165 170 175
238 Trp Thr Tyr Asp Lys Ala Lys Ile Asp Leu Val Ser Met His Ser His
239 180 185 190
240 Val Asp Gln Leu Asp Tyr Trp Glu Ser Gly Glu Trp Val Ile Ile Asn
241 195 200 205
242 Ala Val Gly Asn Tyr Asn Ser Lys Lys Tyr Glu Cys Cys Thr Glu Ile
243 210 215 220
244 Tyr Pro Asp Ile Thr Tyr Ser Phe Ile Ile Arg Arg Leu Pro Leu Phe
245 225 230 235 240
246 Tyr Thr Ile Asn Leu Ile Ile Pro Cys Leu Leu Ile Ser Cys Leu Thr
247 245 250 255
248 Val Leu Val Phe Tyr Leu Pro Ser Glu Cys Gly Glu Lys Ile Thr Leu
249 264

Input Set : A:\PTO.DC.txt
Output Set: N:\CRF3\04032002\I941179A.raw

265 260 265 270
267 Cys Ile Ser Val Leu Leu Ser Leu Thr Val Phe Leu Leu Leu Ile Thr
268 275 280 285
270 Glu Ile Ile Pro Ser Thr Ser Leu Val Ile Pro Leu Ile Gly Glu Tyr
271 290 295 300
273 Leu Leu Phe Thr Met Ile Phe Val Thr Leu Ser Ile Ile Ile Thr Val
274 305 310 315 320
276 Phe Val Leu Asn Val His His Arg Ser Pro Arg Thr His Thr Met Pro
277 325 330 335
279 Asp Trp Val Arg Arg Val Phe Leu Asp Ile Val Pro Arg Leu Leu Phe
280 340 345 350
282 Met Lys Arg Pro Ser Thr Val Lys Asp Asn Cys Lys Lys Leu Ile Glu
283 355 360 365
285 Ser Met His Lys Leu Thr Asn Ser Pro Arg Leu Trp Ser Glu Thr Asp
286 370 375 380
288 Met Glu Pro Asn Phe Thr Thr Ser Ser Pro Ser Pro Gln Ser Asn
289 385 390 395 400
291 Glu Pro Ser Pro Thr Ser Ser Phe Cys Ala His Leu Glu Glu Pro Ala
292 405 410 415
294 Lys Pro Met Cys Lys Ser Pro Ser Gly Gln Tyr Ser Met Leu His Pro
295 420 425 430
297 Glu Pro Pro Gln Val Thr Cys Ser Ser Pro Lys Pro Ser Cys His Pro
298 435 440 445
300 Leu Ser Asp Thr Gln Thr Thr Ser Ile Ser Lys Gly Arg Ser Leu Ser
301 450 455 460
303 Val Gln Gln Met Tyr Ser Pro Asn Lys Thr Glu Glu Gly Ser Ile Arg
304 465 470 475 480
306 Cys Arg Ser Arg Ser Ile Gln Tyr Cys Tyr Leu Gln Glu Asp Ser Ser
307 485 490 495
309 Gln Thr Asn Gly His Ser Ser Ala Ser Pro Ala Ser Gln Arg Cys His
310 500 505 510
312 Leu Asn Glu Glu Gln Pro Gln His Lys Pro His Gln Cys Lys Cys Lys
313 515 520 525
315 Cys Arg Lys Gly Glu Ala Ala Gly Thr Pro Thr Gln Gly Ser Lys Ser
316 530 535 540
318 His Ser Asn Lys Gly Glu His Leu Val Leu Met Ser Pro Ala Leu Lys
319 545 550 555 560
321 Leu Ala Val Glu Gly Val His Tyr Ile Ala Asp His Leu Arg Ala Glu
322 565 570 575
324 Asp Ala Asp Phe Ser Val Lys Glu Asp Trp Lys Tyr Val Ala Met Val
325 580 585 590
327 Ile Asp Arg Ile Phe Leu Trp Met Phe Ile Ile Val Cys Leu Leu Gly
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331 610 615 620
335 <210> SEQ ID NO: 4
336 <211> LENGTH: 31
337 <212> TYPE: DNA
338 <213> ORGANISM: Artificial Sequence

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/941,179A

DATE: 04/03/2002
TIME: 11:43:42

Input Set : A:\PTO.DC.txt
Output Set: N:\CRF3\04032002\I941179A.raw

L:8 M:283 W: Missing Blank Line separator. <140> field identifier